- 1 Silvester S, Allen H, Withey C, Morgan M, Holland WW. The provision of medical services to sick doctors. London: Nuffield Provincial Hospital Trust, 1994.
- 2 Fish J, Steinert Y. Helping physicians in distress. Can Fam Physician 199541249-55.
- 3 Sutherland VJ, Cooper C. Identifying distress among general practitioners predictors of psychological ill-health and job dissatisfaction. Soc Sci Med 199337575-81.
- 4 Caplan RP. Stress, anxiety, and depression in hospital consultants, general practitioners, and senior
- health service managers. BMJ 19943091261-3.

 5 Spurgeon P, Barwell F, Maxwell R. Types of work stress and implications for the role of general practitioners. Health Services Management Research 1995;8(3):186-97.
- 6 Aasland O. The Norwegian research program on physician health and welfare. Lysaker, Norway: Norwegian Medical Association, 1994.
- 7 Chambers R. End of year report on the Staffordshire support scheme. Stoke-on-Trent: Centre for Primary Health Care, Keele University, 1995.
- 8 Howie J, Porter M, Heaney D. General practitioners, work and stress. London: Royal College of General Practitioners, 1993. (Occasional paper No 61.)
- 9 Firth Cozens J. Emotional distress in junior house officers. BMJ 1987;295:533-6.
- 10 Styles W. Stress in undergraduate medical students: the mask of relaxed brilliance. Br J Gen Pract 1993;43:46-7.
- 11 McKevitt C, Morgan M, Simpson J, Holland W. Doctors' health and needs for services. London: Nuffield Provincial Hospital Trust, 1996.
- 12 Richards C. The health of doctors. London: King's Fund, 1989.
- 13 Chambers R, Belcher J. Self-reported health care over the past 10 years: a survey of general practitioners. Br J Gen Pract 1992;42:153-6.
- 14 Mitchell D, Ledingham J, Ashley-Miller M, eds. Taking care of doctors' health. London: Nuffield Provincial Hospital Trust, 1996.

Time to redefine authorship

A conference to do so

Physicists do it by the hundred; scientists do it in groups; fiction writers mostly alone. And medical researchers? Rarely now do they write papers alone, and the number of authors on papers is increasing steadily. Under pressure from molecular biologists, the National Library of Medicine in Washington is planning to list not just the first six authors in Index Medicus but the first 24 plus the last author.2 Notions of authorship are clearly in the eye of the beholder, and many authors on modern papers seem to have made only a minimal contribution.3-5 Few authors on modern multidisciplinary medical papers fit the 19th century notion of taking full responsibility for every word and thought included, and yet the cumbersome definition of authorship produced by the International Committee of Medical Journal Editors (the Vancouver Group) is based on that concept.6 The definition produced by editors seems to be out of touch with what is happening in the real world of research, and researchers and editors need to consider a new definition. The BMJ, Lancet, University of Nottingham, and Locknet (a network to encourage research into peer review⁷) are therefore organising a one day meeting on 6 June in Nottingham to consider the need for a new definition. All the members of the Vancouver Group will be there, and everybody is welcome.

The Vancouver Group's definition is in two parts. Firstly, it states that "each author should have participated sufficiently in the work to take full responsibility for the content." Once this responsibility has been accepted, "credit should be based only on substantial contributions to (a) conception and design, or analysis and interpretation of data; and to (b) drafting the article or revising it critically for important intellectual content; and on (c) final approval of the version to be published." (Editors write no better than anybody else when they write in committee.) The demands that now seem difficult to sustain are that "conditions (a), (b), and (c) must all be met" and that "acquisition of funding or the collection of data does not justify authorship." Moreover, most researchers can cite instances when the recommendation that "general supervision of the research group is not sufficient" has been happily ignored.

Two studies have shown that the Vancouver Group's definition is commonly ignored, and a recent survey from Susan Eastwood and others has probed the problems of authorship. She and her colleagues questioned 1005 postdoctoral fellows; almost half of the 324 respondents believed that being "head of the lab" was enough to be cited as an author, and 44% thought that those who "obtained funding" warranted authorship. One fifth of respondents said that they had been excluded as an author despite deserving authorship, and 38% of those who had been an author said that another author on their paper should not have been so credited. Clearly the ideas of researchers and editors on authorship differ substantially. Eastwood and colleagues conclude that

"the ICMJE's ideal model must be reconciled with the agreements operative in science."

Authorship matters greatly: it is at the centre of academic life. Indeed, Eastwood and colleagues found that a third of their respondents were willing to cite an undeserving author if it would help publication of their work or enhance their career. The existing definition of what constitutes authorship is becoming unworkable, and it may be that by adopting a very restrictive definition, the Vancouver Group is encouraging researchers to be dishonest. This is not like saying that we should raise the speed limit because everybody is speeding; rather we need to consider whether the present rules are encouraging wrongdoing. Perhaps we need a very different concept of authorship: one possibility is to drop an all or nothing definition and move to something like film credits. Researchers could then state exactly what they did.

It is time for editors to listen to researchers, not simply to impose their arbitrary and anachronistic rules. That is the idea behind the meeting we are organising, and we hope for a large attendance. The day will begin with new data on the state of authorship. Presenters will include Drummond Rennie (deputy editor of JAMA), Raj Bhopal (professor of public health in Newcastle and coordinator of the Locknet group on authorship), Lois Ann Colaianni (deputy director of the National Library of Medicine), and a clinical trialist. After the data are presented we will split into groups to consider new definitions of authorship. Though the meeting will be hosted by editors, it is designed primarily for investigators. We hope to see you in Nottingham.

> RICHARD HORTON Editor

Lancet. London WC1B 3SL

RICHARD SMITH Editor

LondonWC1H9IR

Both authors are members of the International Committee of Medical Journal Editors (the Vancouver Group.) A version of this editorial appears in this week's issue of the Lancet.

The cost of the conference will be £30 (\$50) to cover refreshments and incidental expenses. For further information contact Gaby Shockley, BMJ, BMA House, Tavistock Square, London WC1H 9JR; fax +44 171 387 4499; email 100730.1250@compuserve.com

- 1 Epstein RJ. Six authors in search of a citation:villains or victims of the Vancouver convention? BMJ 1993:306:765-7
- 2 Schulman J-L. New author policy for NLM indexes and databases. NLM Technical Bulletin 1995;287:17.
- 3 Shapiro DW, Wenger NS, Shapiro MF. The contributions of authors to multiauthored biomedical research papers. JAMA 1994;271:438-42.
 4 Goodman N. Survey of fulfilment of criteria for authorship in published medical research. BMJ
- 1994;309:1482.
- 5 Eastwood S, Derish P, Leash E, Ordway S. Ethical issues in biomedical research: perceptions and practices of postdoctoral reseach fellows responding to a survey. Science and Engineering Ethics 1996;2:89-114.
- 6 International Committee of Medical Journal Editors. Guidelines on authorship. BMJ 1985;291:722.
- 7 Smith R. Promoting research into peer review. BMJ 1994;309:143.

BMJ VOLUME 312 23 MARCH 1996